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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,470	03/30/2001	Kenji Yamagami	36992.00073 (HAL 170)	5742
30256	7590	08/11/2005	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P. 600 HANSEN WAY PALO ALTO, CA 94304-1043			SIDDIQI, MOHAMMAD A	
			ART UNIT	PAPER NUMBER

2154

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,470

Applicant(s)

YAMAGAMI, KENJI

Examiner

Mohammad A. Siddiqi

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/13/2005 has been entered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sicola et al. (6,629,264) (hereinafter Sicola).

5. As per claim 1, Sicola discloses a storage system apparatus, comprising:

a first storage system for storing data (101,112, fig 1, col 3, lines 1-16; col 6, lines 14-31), and a second storage system remote from the first storage volume for storing a remote mirror copy of the data (101,112, fig 1, col 3, lines 1-16; col 6, lines 14-31);

a plurality of ports (col 6, lines 14-31), providing switch-able connection (103, fig 1) from said first storage system via a plurality of networks to said second storage system (101,112, 103, fig 1, col 3, lines 1-16; col 6, lines 14-31), said plurality of networks including a first network and a second network (101,112, fig 1, col 3, lines 1-16; col 6, lines 14-31), said first network having a higher priority than said second (priority given to home node, col 17, lines 1-21); and

a processor (controller software architecture, col 9, lines 10-20);

wherein said processor selects at least one of said plurality of ports (col 6, lines 14-31) to send data from the first storage system to the second storage system (host to remote controller, col, 9, lines 10-31), said selection based upon a comparison of at least one condition in said plurality of

networks against at least one user provided policy (system allows choices to be made by the user, col 6, lines 61-64).

6. As per claim 2, Sicola discloses at least one condition comprises at least one of a throughput, a busy rate, an error rate, and a presence of an error (failover and I/O operations, col 3, lines 18-27).

7. As per claim 3, Sicola discloses a plurality of status indications (status of link, col 4, lines 36-46), said plurality of networks each having at least one of said plurality of status indications associated therewith (101,112, fig 1, col 3, lines 1-16; col 6, lines 14-31); and wherein said processor determines based upon said status indications whether to select a port from said plurality of ports (status of link, col 4, lines 36-46).

8. As per claim 4, Sicola discloses a network monitor, said network monitor operable to detect a condition within at least one of said plurality of networks, and thereupon set said status indication (status of link, col 4, lines 36-46).

9. As per claim 5, Sicola discloses status indication comprises at least one of available, temporarily unavailable, and unavailable (detection of link can

only be accomplished by monitoring; status of link establishes reliable communication, col 4, lines 36-46).

10. As per claim 6, Sicola discloses policy comprises at least one of a threshold, a maximum, a minimum, an average, a mean, a limit, a constraint, a priority, and a target policy (system allows choices to be made by the user, col 6, lines 61-64; col 17, lines 1-21).

11. As per claim 7, Sicola discloses plurality of networks are grouped into a plurality of path groups, wherein said policies are associated with networks in a particular path group (col 7, lines 12-29; col 6, lines 61-64; col 17, lines 1-21).

12. As per claim 8, Sicola discloses first storage system and said second storage system comprises a plurality of volumes (col 8, lines 51-63).

13. As per claim 9, Sicola discloses each of said plurality of volumes is permitted to access networks of at least one of said plurality of path groups (col 7, lines 12-29; col 8, lines 51-63).

14. As per claim 10, Sicola discloses a method comprising:

storing data in a primary storage volume (101,112, fig 1, col 3, lines 1-16; col 6, lines 14-31);

specifying a first network to be used for transferring remote mirror copy data from the primary storage volume to a secondary storage volume remote from the primary storage volume (101,112, fig 1, col 3, lines 1-16; col 6, lines 14-31);

specifying a first-network-based constraint for said first network (constraint: N usually having a value of 2,col 3, lines 28-32);

specifying a second network to be used for transferring the remote mirror copy data from the primary storage volume to the secondary storage volume (host to remote controller, col, 9, lines 10-31);

making said first network a higher priority network than said second network (priority given to home node, col 17, lines 1-21); and

transferring said remote mirror copy data using said first network when conditions in said first network are in accordance with said first-network-based constraint (constraint: N usually having a value of 2,col 3, lines 2-32), otherwise transferring said remote mirror copy data using said second network (elements of fig 16, bi-directional, col 19, lines 49-55).

15. As per claim 11, Sicola discloses transferring a portion of said data using said first network even when conditions in said first network are not in

accordance with said constraint as a test (inquiry, col 20, lines 38-55); monitoring conditions in said first network during said test (inquiry, col 20, lines 38-55); and returning to transferring said remote mirror copy data using said first network when said test reveals that conditions in said first network are again in accordance with said constraint (disaster/fault tolerant system, col 3, lines 28-45; col 20, lines 38-55).

16. As per claim 12, Sicola discloses first network is relatively less expensive to use than said second network (system allows choices to be made by the user, col 6, lines 61-64; col 17, lines 1-21, priority must be based on cost effectiveness):

17. As per claim 13, Sicola discloses specifying said constraint for said first network comprises specifying at least one of a throughput, a busy rate, an error rate, and a presence of an error (failover and I/O operations, col 3, lines 18-27).

18. As per claim 14, Sicola discloses first network is a public network and said second network is a private network (based on network configuration any network can be private/secure and public/internet with in the sprit and scope of the invention, col 7, lines 55-67, col 8, lines 1-11).

19. As per claim 15, Sicola discloses first network is a private network and said second network is a public network (based on network configuration any network can be private/secure and public/internet with in the sprit and scope of the invention, col 7, lines 55-67, col 8, lines 1-11).

20. As per claim 16, Sicola discloses detecting an abnormal condition in said first network and thereupon-transferring data using said second network (901, 902, fig 9).

21. As per claims 17-20, claims are rejected for the same reasons as claims 1-9, above.

Response to Arguments

22. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 6,389,459

U.S Patent 5,633,999

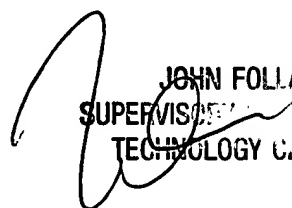
U.S Patent 5,394,555

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAS


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